

(19) JAPANESE PATENT OFFICE (JPO)

(12) Unexamined Patent  
Application Disclosure Bulletin (A)

(11) Japanese Patent Application:

Hei. 6-24932

(43) Disclosure Date: February 1, 1994

(51) Int. Cl.<sup>0</sup>

Notification Code:

Intra-agency Reference No: FI Basis of Classification

A 61 K 7/00

J

9164-4C

P

9164-4C

W

9164-4C

9164-4C

//A 61 K 7/027

Request for Examination: not filed Number of Claims: 3 (Total of 4 pages)

(21) Patent Application No: Hei 4-108330

(22) Application Date: March 18, 1992

(71) Applicant: 000000114  
Kabushiki Kaisha Isehan  
7 Gobancho, Chiyoda-ku, Tokyo

(72) Inventor: Hiroshi Igarashi  
5687-3 Sakata-machi, Mizukaido-shi,  
Ibaragi Prefecture

(54) [Title of the Invention] LIP COAT

(57) [Abstract]  
(Obj ct) To provide a lip coat that, when applied on top of conventional lipstick, prevents the lipstick from coming off, i.e., gives it good lasting power, is not sticky, is easy to remove when removing the makeup, and does not irritate the lips.

[Constitution] A blend of 10-80 percent by weight of an alkylsiloxysilicate component, a solid silicone having the structure  $(R_2Si)_2O \sim SiO_2$  (R: alkyl group), where the alkyl group is a methyl group ( $CH_3$ ), and/or ethyl group ( $C_2H_5$ ), and 20-90 percent by weight of a low-viscosity silicone oil component with a viscosity of no more than 10 cS (25°C).

BEST AVAILABLE COPY

[Claims]

[Claim 1] Lip coat characterized by the fact that it contains component (a), which is provided with the structure described hereinbelow, and component (b):  
 (a) a solid alkylsiloxy silicate  
 (b) a low-viscosity silicone oil with a viscosity of no more than 10 cs (25°C).

Structure of (a)

$(R_2Si)_2O_nSiO_3$  R: Alkyl group

[Claim 2] Lip coat in Claim 1, wherein the alkylsiloxy silicate's alkyl group is a methyl group ( $CH_3$ ), and/or ethyl group ( $C_2H_5$ ), and n ranges from 1 to 5.

[Claim 3] Lip coat in Claims 1 and 2, characterized by the fact that it contains 10-80 percent by weight of component (a) and 20-90 percent by weight of component (b).

Detailed Description of the Invention

[0001]

[Industrial Field of Application] The present invention relates to lip coats. More specifically, it relates to lip coats in which a cosmetic containing a combination of solid alkylsiloxy silicate and low-viscosity silicone oil with no more than a specified viscosity is applied on top of conventional lipstick. The lip coat prevents lipstick from coming off, i.e., gives it good lasting power, is not sticky, is easy to remove when removing makeup, and does not irritate the lips.

[0002]

[Prior Art] Products known as lip coat or lip sealer are applied on top of lipstick to prevent the lipstick from coming off, i.e., to improve its lasting power. Resin-type, wax-type, and latex-type lip coats, comprising a film-forming agent, solvent, and film-adjusting agent, are known in the prior art.

[0003] It is known to use components listed in standards such as Cosmetic Materials (Standards for Cosmetic Materials [Keshohin Genryo Kijun]) and Unlisted Cosmetic Materials (Components not Listed in the Standards for Cosmetic Materials [Keshohin Genryo Kijun-gai Seibun Kikaku]) in the prior art lip coats. (1) Resin-type lip coat: comprises organic solvent such as ethyl alcohol or isopropyl alcohol as the solvent; resin soluble in the solvent such as shellac, rosin, or rosin ester as the film-forming agent; and polyhydric alcohol soluble in the solvent such as glycerol or propylene glycol and/or oil soluble in the solvent such as animal or vegetable oil, for example, mink oil, castor oil, and avocado oil, synthetic ester, or the like as the film-adjusting agent.

[0004] (2) Wax-type lip coat comprises low-melting-point paraffin as a solvent; wax soluble in the solvent such as ceresin, carnauba wax, or microcrystalline wax as the film-forming agent; and oil soluble in the solvent (such as) animal or vegetable oil, for example, squalane, lanolin, jojoba oil, or petroleum jelly, or synthetic ester as the film-adjusting agent.

[0005] (3) Latex-type lip coat comprises water as the solvent; a latex or emulsion latex such as ethyl acrylate-ethyl methacrylate copolymer, octyl acrylate-styrene copolymer, or methyl methacrylate-butyl acrylate-octyl acrylate copolymer as the film-forming agent; and

10

20

30

40

50

60

polyhydric alcohol soluble in the solvent such as glycerol and propylene glycol as the film-adjusting agent.

[0006]

[Problems To Be Solved by the Invention] However, such lip coats known in the art are not satisfactory because they do not prevent lipstick from coming off, i.e., they do not give lipstick lasting power, and they promote stickiness, are difficult to remove when removing makeup, irritate the lips, and peel from the underlying makeup. Thus, the industry desires the development of a lip coat that, when applied on top of lipstick, prevents lipstick from coming off, i.e., gives it good lasting power, is not sticky, is easy to remove when removing makeup, and does not irritate the lips.

[0007]

[Means of Solving the Problems] The inventors devoted extensive research aimed at overcoming these problems. As a result, they discovered that a lip coat which, when applied on top of lipstick, prevents the lipstick from coming off, i.e., gives it good lasting power, is not sticky, is easy to remove when removing makeup, and does not irritate the lips can be obtained by combining solid alkylsiloxy silicate as part or all of the lip coat's film-forming agent, low-viscosity silicone oil as part or all of the solvent, and a synthetic ester soluble in low-viscosity silicone oil as the film-adjusting agent or by combining alkylsiloxy silicate as part or all of the film-forming agent and low-viscosity silicone oil as part or all of the solvent. This discovery led to the present invention. Lip coats featuring a combination of solid alkylsiloxy silicate and low-viscosity silicone oil are unknown in the prior art. Thus, the present invention provides a lip coat characterized by the fact that it contains (a) and (b):

(a) solid alkylsiloxy silicate

(b) low-viscosity silicone oil with a viscosity of no more than 10 cs (25°C).

[0008] The alkylsiloxy silicate (a) used in the present invention is trialkylsiloxy silicate,  $(R_2Si)_2O_nSiO_3$ , where the R-alkyl group is a methyl group ( $CH_3$ ), and/or ethyl group ( $C_2H_5$ ), and n ranges from 1 to 5. The substance is solid at room temperature and is usually a predominantly white powder or mass. The low-viscosity silicone oil (b) with a viscosity of no more than 10 cs (25°C) used in the present invention is methyl polysiloxane, which may be a cyclic polymer  $[(CH_3)_2SiO]_n$ , where n ranges from 3 to 6 or a straight-chain polymer  $(CH_3)_2SiO-[(CH_3)_2SiO]_n-OSi(CH_3)_2$  (illegible), where n ranges from 1 to 12.

[0009] Alkylsiloxy silicate is blended in amounts of preferably 10-80 percent by weight, more preferably 30-60 percent by weight, of the entire composition. If less than 10 percent by weight is used, the effect of the invention is not obtained, and if more than 80 percent by weight is used, the composition loses liquidity, compromising its utility as a cosmetic. Low-viscosity silicone oil with a viscosity of no more than 10 cs is blended in amounts of preferably 20-90 percent by weight, more preferably 40-70 percent by weight, of the entire composition. If less than 20% by weight is used, the composition loses liquidity, compromising its utility as

a cosmetic, and if more than 90 percent by weight is used, too little of the film-forming agent is blended into the composition, and the effect of the invention cannot be obtained. Silicone oil with a viscosity of more than 10 cs (25°C), wax, and the like may be used in addition to the solid alkylsiloxysilicate and low-viscosity silicone oil with a viscosity of no more than 10 cs (25°C), which are the essential components of the lip coat of the invention. In addition, components listed in the publications such as *Cosmetic Materials* and *Unlisted Cosmetic Materials* or components approved for use in cosmetics may be

## Component (Percentage by Weight)

- (1) Trimethylsiloxysilicate
- (2) Decamethylcyclopentasiloxane (4.0 cs)
- (3) Tridecyl isononanoate
- (4) Red No. 225

## (Manufacturing Method)

- a. Melt and mix (1) into (2).
- b. Melt and mix (4) into (3).

## Component (Percentage by Weight)

- (1) Trimethylsiloxysilicate
- (2) Octamethylcyclopentasiloxane (2.3 cs)
- (3) Methyl polysiloxane (2.0 cs)

## (Manufacturing Method)

- a. Melt (1) - (3) and mix until uniform.
- b. Package "a" in containers.

## Component (Percentage by Weight)

- (1) Shellac
- (2) Ethyl alcohol
- (3) Propylene glycol

## (Manufacturing Method)

- a. Mix and melt (1) into (2).
- b. Add (3) to "a" and mix until uniform.

## Component (Percentage by Weight)

- (1) Polyethylene powder
- (2) Microcrystalline wax
- (3) Isoparaffin
- (4) Petroleum jelly

## (Manufacturing Method)

- a. Heat and melt (1) and (2) into (3) and (4).

## Component (Percentage by Weight)

- (1) Ethyl acrylate-ethyl methacrylate copolymer emulsion
- (2) Water
- (3) Glycerol

selected as appropriate for blending into the lip coating of the invention, examples including approved pigments, synthetic starch, oil, beauty components, fragrances, antioxidants, preservatives, and ultraviolet absorbers.

## [0010]

[Working Examples] Working examples are used hereinbelow to describe the present invention, but the invention is not limited in any way to the formulations or viscosities in the examples.

## Working Example 1

## Inventive Product 1

|       |       |
|-------|-------|
|       | 4.50  |
|       | 52.0  |
|       | 3.0   |
|       | Trace |
| Total | 100.0 |

- c. Add "b" to "a" and mix until uniform.
- d. Package "c" in containers.

## [0011] Working Example 2

## Inventive Product 2

|       |       |
|-------|-------|
|       | 30.0  |
|       | 35.0  |
|       | 35.0  |
| Total | 100.0 |

## [0012] [Reference Examples]

## Reference Example 1

## Comparative Product 1

|       |       |
|-------|-------|
|       | 12.0  |
|       | 84.0  |
|       | 4.0   |
| Total | 100.0 |

- c. Package "b" in containers.

## [0013] Reference Example 2

## Comparative Product 2

|  |      |
|--|------|
|  | 10.0 |
|  | 8.0  |
|  | 77.0 |
|  | 5.0  |

|  |       |
|--|-------|
|  | 100.0 |
| b. Package "a" in containers and cool. |       |

## [0014] Reference Example 3

## Comparative Product 3

|       |       |
|-------|-------|
|       | 60.0  |
|       | 33.0  |
|       | 7.0   |
| Total | 100.0 |

Total

BEST AVAILABLE COPY

## (Manufacturing Method)

- a. Mix (1) into (2).
- b. Mix (3) into "a" until uniform.
- c. Package "b" in containers.

[0015] [Evaluation] Inventive Products 1 and 2 obtained in Working Examples 1 and 2, respectively, and Comparative Products 1-3 obtained in Reference Examples 1-3, respectively, were wear-tested by 20 women for valuation.

## (Evaluation Criteria)

| Items Evaluated  | Inventive Product 1 of Working Example | Inventive Product 2 of Working Example |
|--|--|--|
| Good lasting power<br>Not sticky<br>Easy to remove<br>Not irritating | ○<br>○<br>○<br>○                       | ○<br>○<br>○<br>○                       |

[0017]

## Evaluation of Reference Examples

| Items Evaluated  | Comparative Product 1 of Reference Example | Comparative Product 2 of Reference Example | Comparative Product 3 of Reference Example |
|--|--|--|--|
| Good lasting power<br>Not sticky<br>Easy to remove<br>Not irritating | ○<br>△<br>✗<br>✗                           | △<br>✗<br>△<br>✗                           | ✗<br>✗<br>△<br>△                           |

In the evaluation, Comparative Product 1 was difficult to remove and showed marked irritation of the lips; Comparative Product 2 was sticky and showed marked irritation of the lips; and Comparative Product 3 was sticky and had poor lasting power. By contrast, the products of the invention showed excellent lasting power, were not sticky, were easy to remove with the makeup, and did not irritate the lips.

[0018]

Good: 3 points

Fair: 2 points

Poor: 1 point

## (Evaluation)

Mean score of at least 2.5 points .... ○

Mean score of 1.5-2.5 points .... △

Mean score of less than 1.5 points ... ✗

[0019]

## Evaluation of Working Examples